Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENDALL S. WILLS and PAUL A. RODRIGUEZ

Appeal No. 1999-0559
Application No. 08/846,949

ON BRIEF

Before KIMLIN, PAK and WARREN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 2-4, 9, 10 and 20-22, all the claims remaining in the present application. Claim 20 is illustrative:

20. A semiconductor device, comprising:

a substrate;

a shallow tank in said substrate, said shallow tank having a conductivity type opposite the conductivity type of said substrate;

a first source/drain region in said shallow tank, said first source/drain region having a conductivity type opposite the conductivity type of said shallow tank;

a second source/drain region in said shallow tank, said second source/drain region being spaced from said first source/drain region and having a conductivity type opposite the conductivity type of said shallow tank;

a gate having a first end adjacent said first source/drain region and a second end adjacent said second source/drain region; and

a low resistance programmed area within one and only one of said source/drain regions at a junction of said source/drain region and said shallow tank, said low resistance programmed area being spaced laterally from said gate.

The examiner relies upon the following references as evidence of obviousness:

Aswell et al. (Aswell)	4,387,503	June 14, 1983
Willis et al. (JP '654) (Japanese Kokai patent application)	61-81654	Apr. 25, 1986

The present application is a continuation of Application No. 08/485,590, filed June 7, 1995, now abandoned, which, in turn, is a divisional of U.S. Application No. 08/070,487, filed June 2, 1993. An appeal was taken to this Board in the grandparent application (Appeal No. 95-0675). The appealed claims in the prior appeal were essentially directed to a

method of making the presently claimed semiconductor device. In a decision dated August 24, 1998, a merits panel of the Board reversed the examiner's § 102 rejection over JP '654, as well as the examiner's § 103 rejection over Aswell in view of the admitted prior art. The claims presently on appeal stand rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of Aswell and JP '654.

Upon careful consideration of the opposing arguments presented on appeal, we will not sustain the examiner's rejection.

In essence, we concur with appellants that the examiner, at best, has demonstrated how the applied prior art could be modified to arrive at the claimed semiconductor device. However, as pointed out by appellants, the fact that the prior art could be modified in the manner proposed by the examiner is not the proper test for obviousness under § 103 in the absence of a suggestion in the prior art for the modification. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). In the present case, the examiner has not satisfactorily explained why one of ordinary skill in the art would have been motivated to modify the device of Aswell to

include the shallow tank found in the device of JP '654, and presently claimed, or, likewise, why the skilled artisan would have been motivated to modify the Figure 2 embodiment of Japanese '654 to have both source/drain regions to be of the same conductivity type, or to have modified the Figure 5 embodiment of Japanese '654 to have the low resistance programmed area within one and only one of the source/drain regions. We note that appellants' specification discloses at page 1 that the programming method of Aswell is effective as long as the substrate is biased at ground but does not take into account a substrate biased at a negative potential.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN Administrative Patent Judge	)	
CHUNG K. PAK Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES

)
CHARLES F. WARREN)
Administrative Patent Judge)

ECK:clm

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